

8/13/99

# SMT Channel Geometry Check

Peter Hamel and Tom Trippe

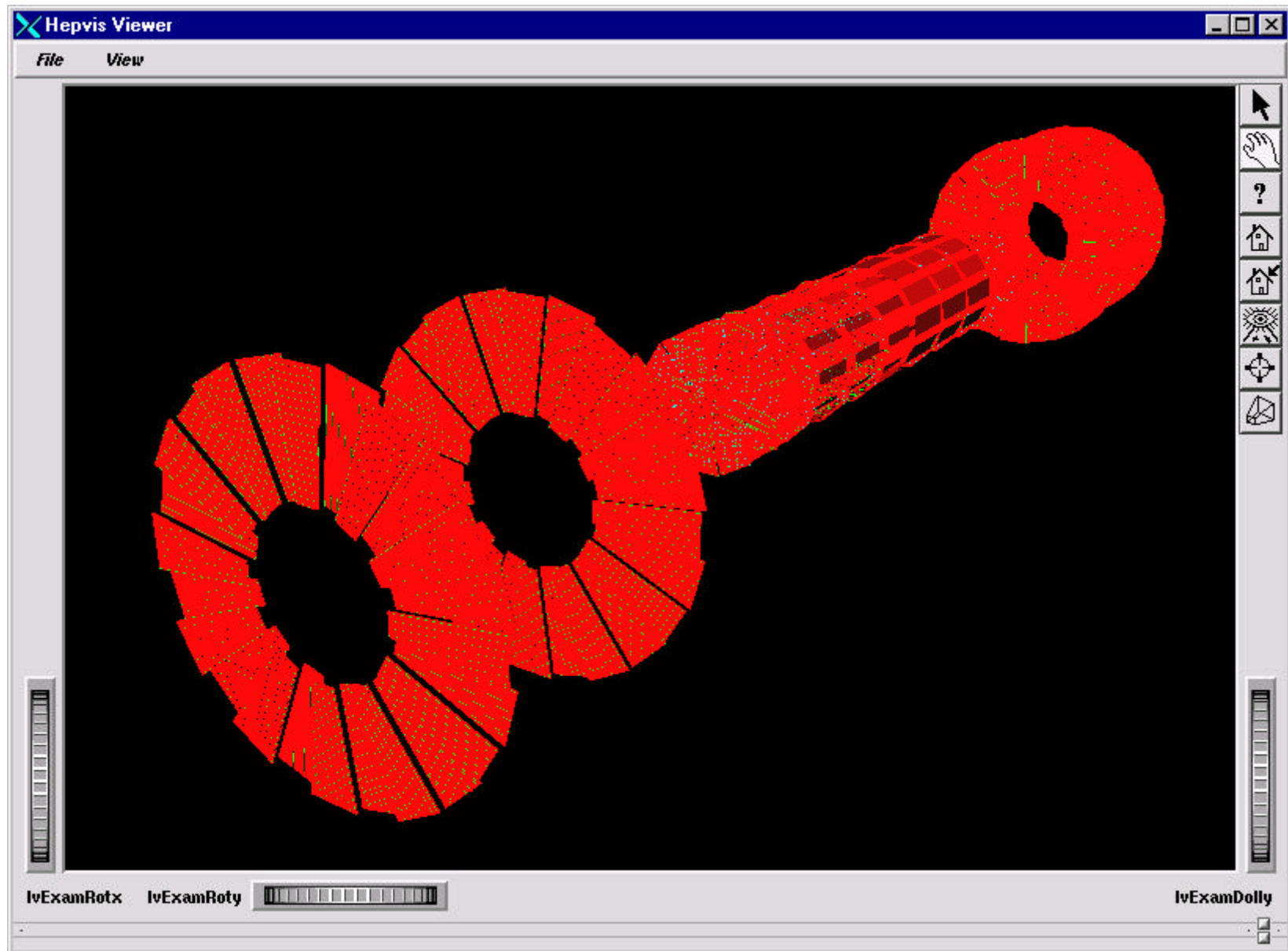
- Pictures from package `smtGeomDisplay`
- Uses HEPVis ladders (stereo, dbl 90, single)
- Uses Peter's HEPVis Wedges (double, single)
- Command line interface to choose which parts to display
- Sample strips loaded
  - strips 1-5, 100, 200,..., last. p-side strips green, n-side strips blue.
- Pictures are for Si geometry and rcp files as of t00.55.00
  - Used in current GEANT and Reco
- Compared GEANT/Reco geometry with real DØ detector
  - Most strip numbering is wrong in GEANT/Reco

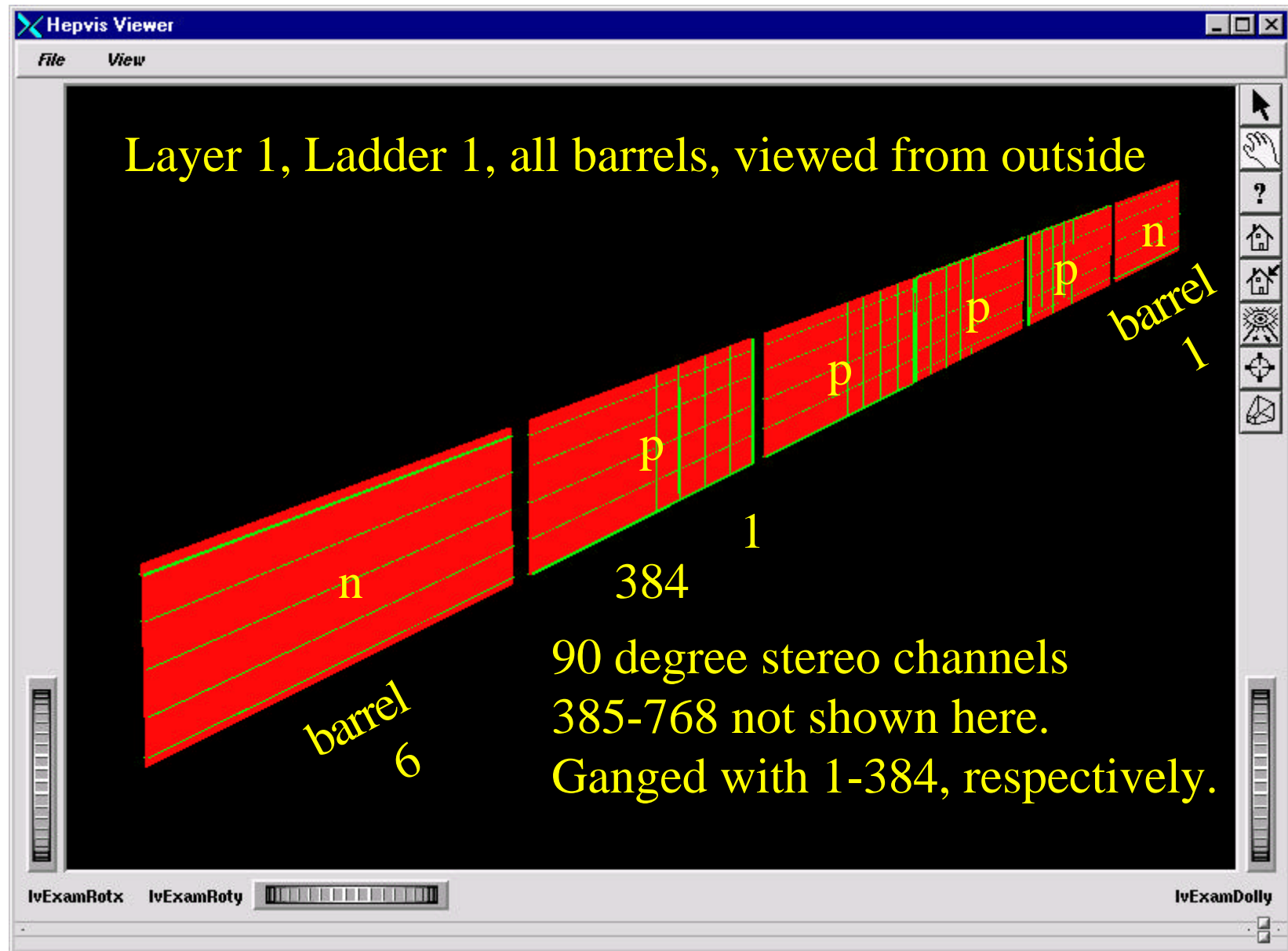
# GEANT/Reco vs DØ strip numbering

Ladder edge ( $\pm x, \pm z$  in ladder frame) of strip 1 and channel 0

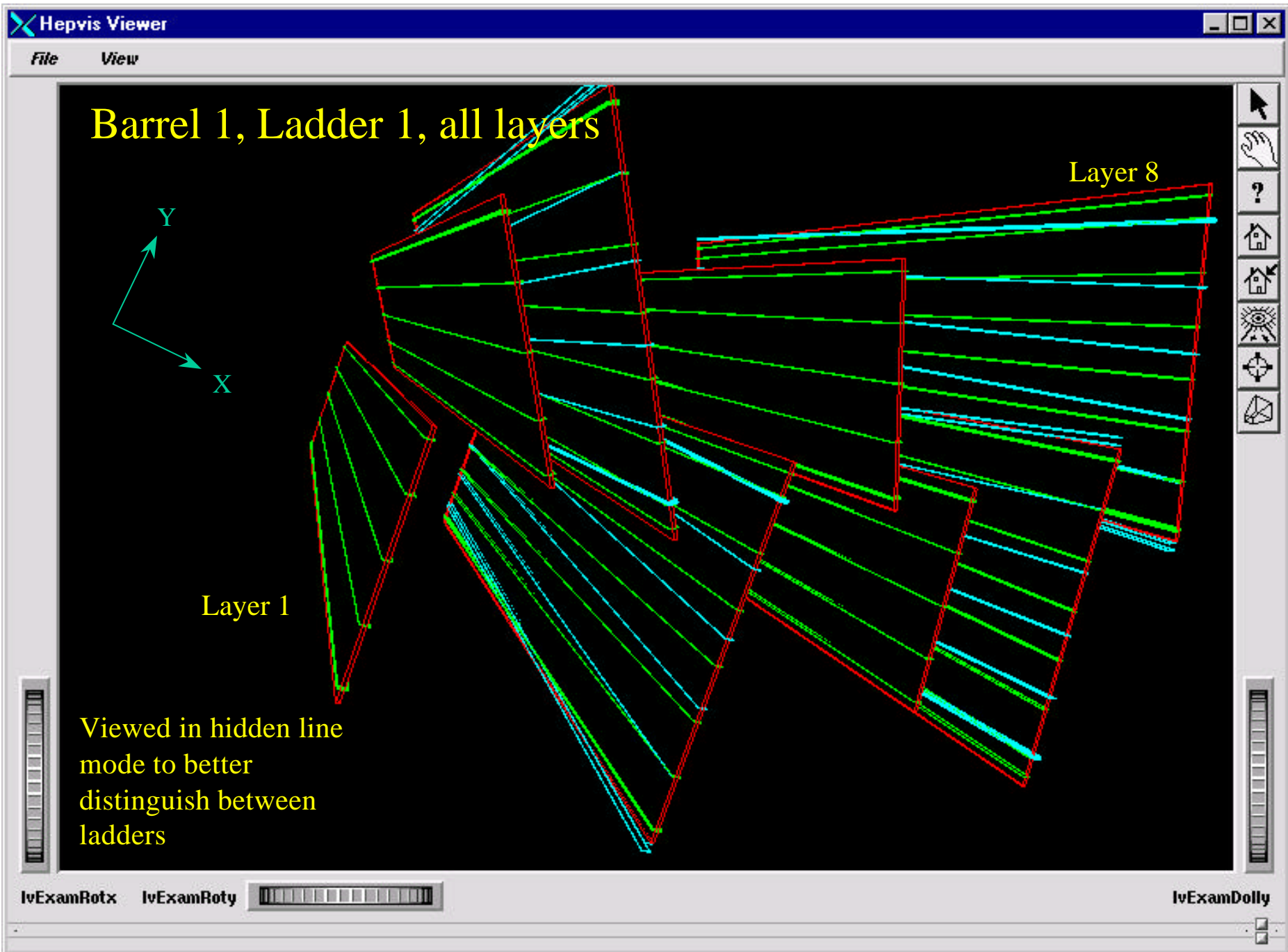
Ladder type Ladder side	DØ strip 1	DØGSTAR strip 1	DØ channel 0
Narrow 1 sided p-side (axial)	+x	-x	-x
Narrow 2 sided p-side (axial) n-side (90°)	+x -z	-x +z	+x +z
Wide 2 sided, +2° p-side (axial) n-side (+2°)	+x +x	-x +x	+x +x
Wide 2 sided, -2° p-side (axial) n-side (-2°)	+x +x	Not in Not in	+x +x

- DØGSTAR/Reco strip 1 edge wrong almost everywhere
- Needs coordinated GEANT, Reco offline geometry fixes





Confusion: DØGSTAR axial strips, DØ 90° strips

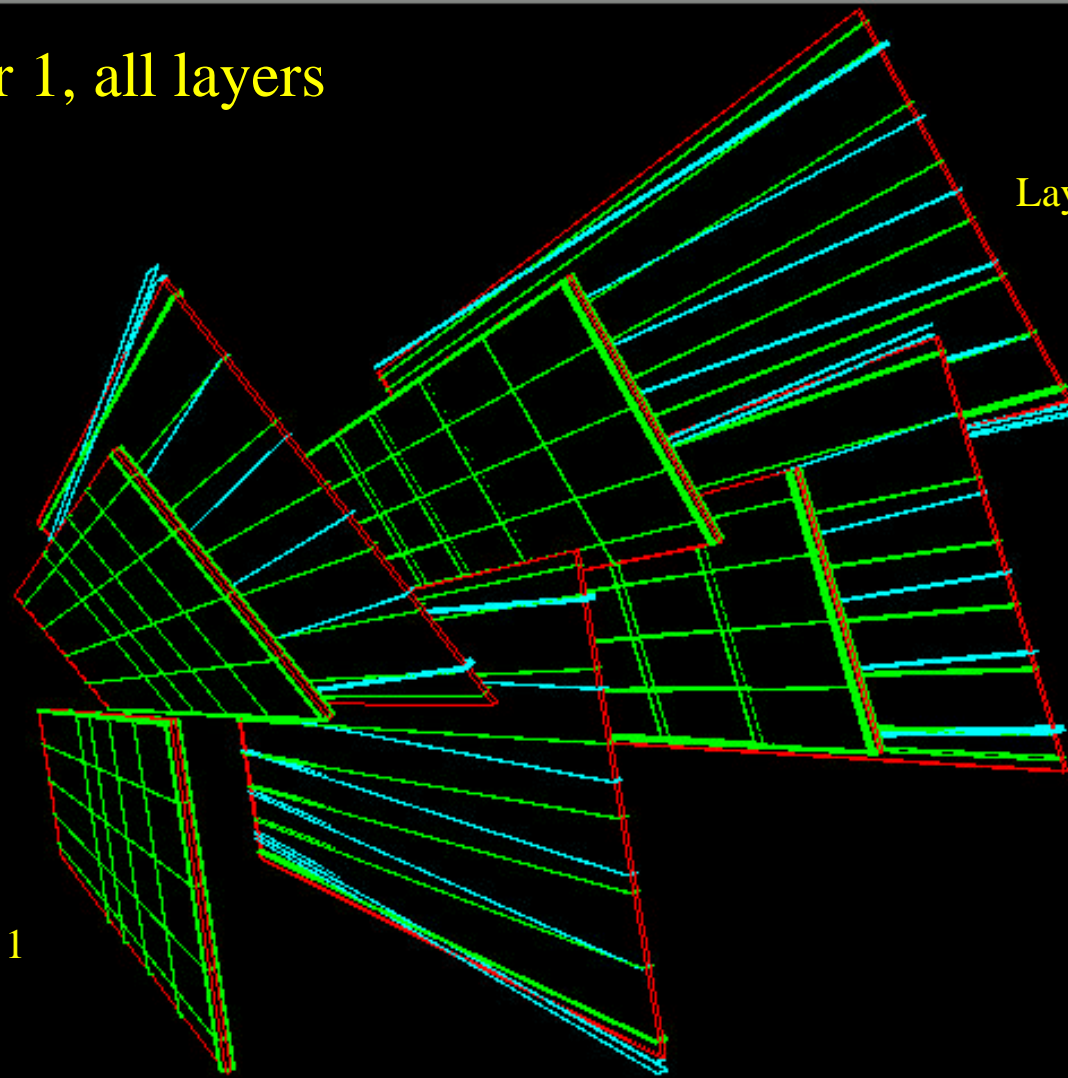
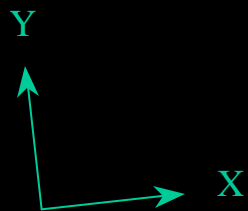


## Barrel 2, Ladder 1, all layers

viewed in hidden line  
mode to better  
distinguish between  
ladders

Layer 8

Layer 1

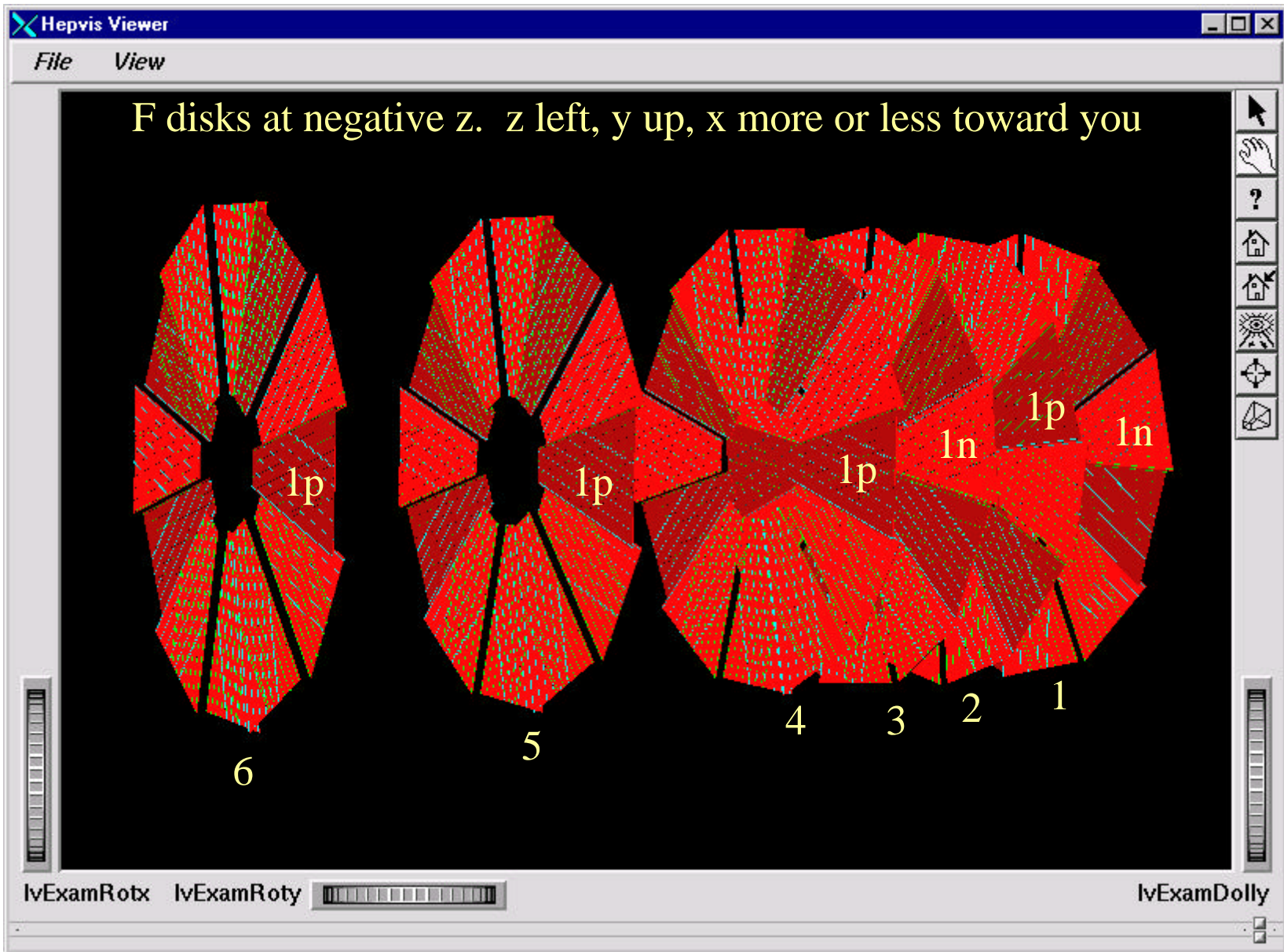


IvExamRotx

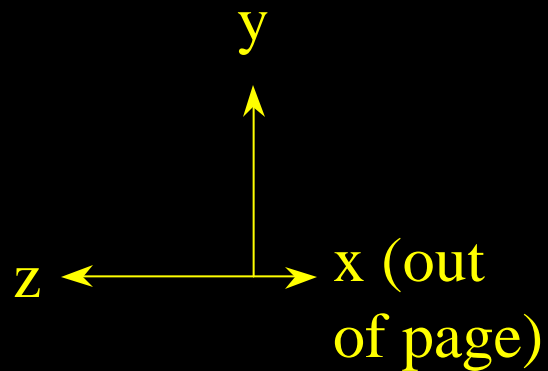
IvExamRoty

IvExamDolly





DØSTAR configuration.  
DØ strips start on  
opposite edge.



H disk, looking at wedge 1  
nearly from the edge. Strip 1  
(heaviest) is at top in view 1,  
bottom in view 2.

